## NextGen Institute Annual Public Meeting

October 16, 2009

U.S. Department of Transportation Headquarters (Conference Center-Oklahoma Room)















## **Overview**

- NextGen Operations
- NextGen Contracts Update
- Integrated Communications, Navigation, Surveillance (ICNS)
- Emergency Management Operations and Control System (EMOCS)















## **Our Web Address**

www.ncat.com/ngats/index.html





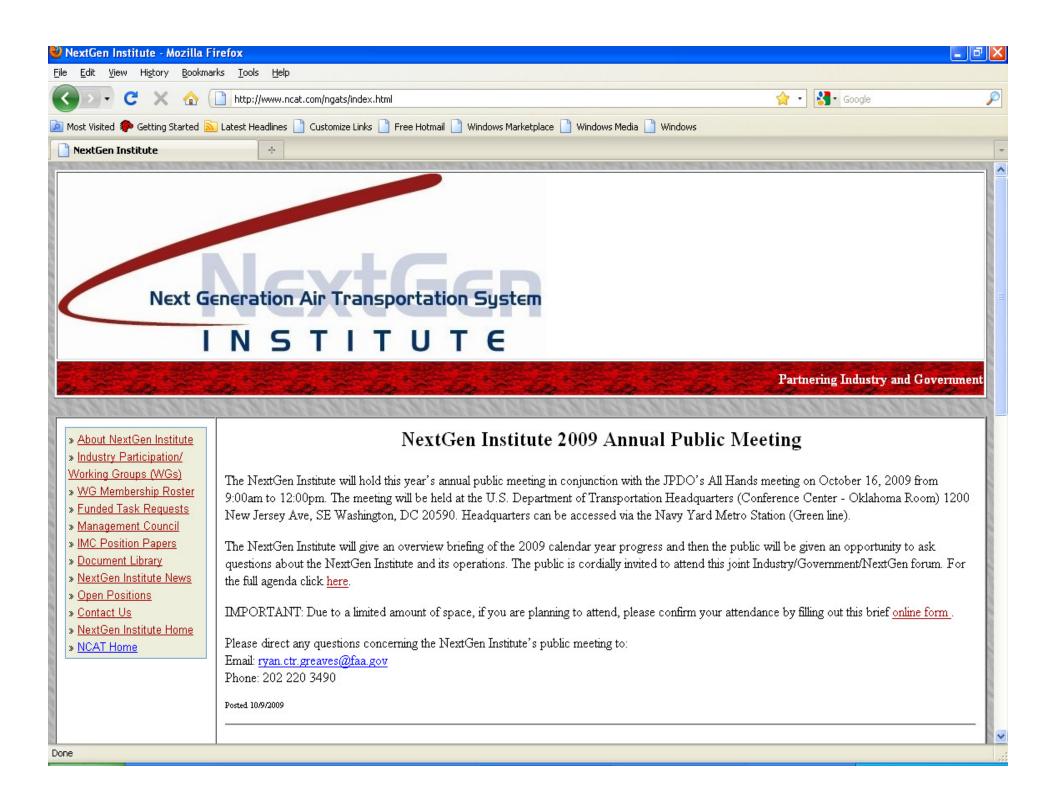












## **NextGen Overview**

- Vision 100—Century of Aviation Reauthorization Act, Pub. L. 108-176, represents a multi-agency initiative to transform the future air transportation system.
- This act created the JPDO as the means by which six government agencies combine resources and talent to effect the transformation and further, Vision 100 directed that "the [Joint Planning and Development] Office shall consult with the public and ensure participation of experts from the private sector."
- The NextGen Institute was established in March 2005 via an Other Transactions Agreement between the National Center for Advanced Technologies (NCAT) and the Federal Aviation Administration (FAA)
- "...the mechanism through which the JPDO will access world-class private sector expertise, tools, and facilities for application to NextGen activities and tasks."















## Purpose

- Enabling partnership between the government and private sector on goals and priorities and definition, development, and implementation of NextGen
- Establishing a mechanism for gathering and applying the best expertise in support of NextGen
- Encouraging the development of transformational ideas
- Sustaining a long-term undertaking by promoting jointly supporting solutions and coordinated investments















## Goals

- Establish the mechanism for the JPDO to access worldclass expertise, tools, and facilities for application to the NextGen activities and tasks
- Conduct FAA/JPDO-requested work in support of planning, research, analysis, assessment, architecture, setting functional requirements, prototyping, simulation, and demonstrating future system attributes
- Validate new concepts and approaches
- Establish and maintain a collaborative relationship between the government and private sector that will serve as a catalyst for fostering a shared vision of NextGen and combine the talents and resources of government, industry and academia















## Institute Management Council

- IMC serves as an industry decision-making body providing oversight
- Advise the JPDO Director and FAA Senior VP of NextGen and Operations Planning on NextGen planning and implementation priorities
- Assist the JPDO Director and FAA Senior VP of NextGen and Operations Planning in communicating these priorities to FAA Administrator and other government stakeholders
- Invite FAA Administrator and key staff to IMC meetings to ensure industry priorities are understood















## Institute Management Council Roster

#### Co-Chairmen

James C. May - Air Transport
 Association
 Marion Blakey – Aerospace Industries
 Association

#### **Commercial Airline Operations**

 \*James C. May - Air Transport Association

#### **Commercial Pilots**

 \*John Prater- Air Line Pilots Association

#### **Air Traffic Control Technology**

 \*Pete Dumont- Air Traffic Control Association

#### **Air Traffic Controllers**

 Pat Forrey- National Air Traffic Control Association

#### **Airport Operators**

 Greg Principato - Airports Council International - North America

#### At Large

- Michael McCormick National Business Travel Association
- Henry Ogrodzinski National Association of State Aviation Officials
- Charlie Huettner Aerospace States Association

#### **Business Aircraft Operations**

 Ed Bolen - National Business Aviation Association















Next Generation Air Transportation System
Joint Planning and Development Office

## Institute Management Council Roster (cont'd)

#### Federal Advisory Committees, Universities, and Non Profit **Research Organizations**

- Margaret Jenny RTCA
- Steve Hampton Embry-Riddle Aeronautical University

#### Small Aircraft General Aviation

Craig Fuller - Aircraft Owners and Pilots Association

#### **Helicopter Operations**

Matt Zuccaro - Helicopter Association International

#### Manufacturers of Air Vehicles and Airborne/Space-borne and Ground **Based Equipment**

\*Marion Blakey - Aerospace Industries Association \*Peter J. Bunce - General Aviation Manufacturers Association

#### **Regional Commercial Airline Operations**

Roger Cohen - Regional Airline Association

#### **Ex-Officio**

\*Charlie Leader - Joint Planning and **Development Office** 

\*-Executive Committee Member

















## **Overall Industry Commitment**

- > 300 approved Industry Working Group (WG) members integrated in planning
- Organized in 9 WG and Study Teams
- ~ 20% of their time
- Salary/Travel Costs/Expenses pro bono
- Industry Commitment Exceeds \$14 Million a year















### Next Generation Air Transportation System Optimizing Sequencing in the Terminal Area Phase 1

- **Sponsor:** Environment Working Group
- Contractor: Innovative Solutions International, Inc.
- Contract Value: \$250k
- Purpose: Conduct investigations for the integration of CNS/ATM technologies to support applications that will reduce fuel burn, emissions and noise, and eliminate terminal area airspace congestion.

The validation of this concept can provide a path forward for Next Generation Air Transportation System (NextGen) implementation of safer, cleaner, and more efficient terminal area operations across the U.S.

- **Start Date:** August 17, 2007
- Status: All deliverables have been approved by the **Environment Working Group.**

















## Optimizing Sequencing in the Terminal Area Phase 2

- Sponsor: Environment Working Group
- Contractor: Innovative Solutions International, Inc.
- Contract Value: \$250k
- Purpose: Conduct demonstrations of the integration of CNS/ATM technologies to support applications that will reduce fuel burn, emissions and noise, and eliminate terminal area airspace congestion.
- Start Date: Sept. 30, 2008
- Status: The contract for Phase 2 was signed on September 30, 2008.
  - -Period of Performance extended to 9/30/10
  - -First three of six Deliverables accepted by Environment WG
  - -Remaining three deliverables:
    - -Flight Demonstration Tests
    - -Analysis of Operational and Environmental Improvements Draft Report
    - -Written Report















## **Emergency**

## **Management Operation Control System** (EMOCS)

**Sponsor:** Aviation Security Working Group

**Contractor:** Harris Corp.

Contract Value: \$350k

- **Purpose:** The purpose of this task is to plan for the development and implementation of a fully operational low altitude airspace emergency management communications, navigation, surveillance, and weather system, applicable to both the civil and government first responders, which can support both fixed and rotary wing operations.
- Start Date: December 17, 2007
- **Status:** The deliverables have been approved by the Aviation Security Working Group















## NextGen Integrated

## Communications, Navigation, Surveillance (ICNS) Study

- Sponsor: Air Navigation Services and Aircraft Working Groups
- **Contractor:** Raytheon
- Contract Value: \$2.25M
- **Purpose:** There were be two phases to this study. The first phase included an operational narrative/scenario, create top-level ICNS requirements to enable the operational scenarios, identify a set of alternatives, and identify and prioritize the analyses to be conducted. Phase 2 further defined and expanded Phase 1 products, executed the required analyses, and developed the remaining deliverables.
- Start Date: Contract Award March 9, 2009
- Status: All deliverables have been accepted















## Integrated Communications, Navigation, Surveillance (ICNS) Study

Raytheon Team















# Emergency Management Operation Control System (EMOCS)

Aviation Security Working Group















## Question and Answer Session















